Surface Storage Progress Report

Presented to:

BDPAC Water Supply Subcommittee

July 13, 2005

Outline

- Major Findings Since April 2004 Report
- Common Considerations & Next Steps
- Project Specific Considerations
- Status of the Five Storage Projects (Detailed Look at each project)

Progress Report No. 2

- Progress Report No. 2 completed in May 2005
- Supported by results of Common Assumptions *Progress Report Common Model Package*
- Progress Report and Technical Memorandum are available online at DWR website:

  www.storage.water.ca.gov/public_docs.cfm

Intent of Progress Report

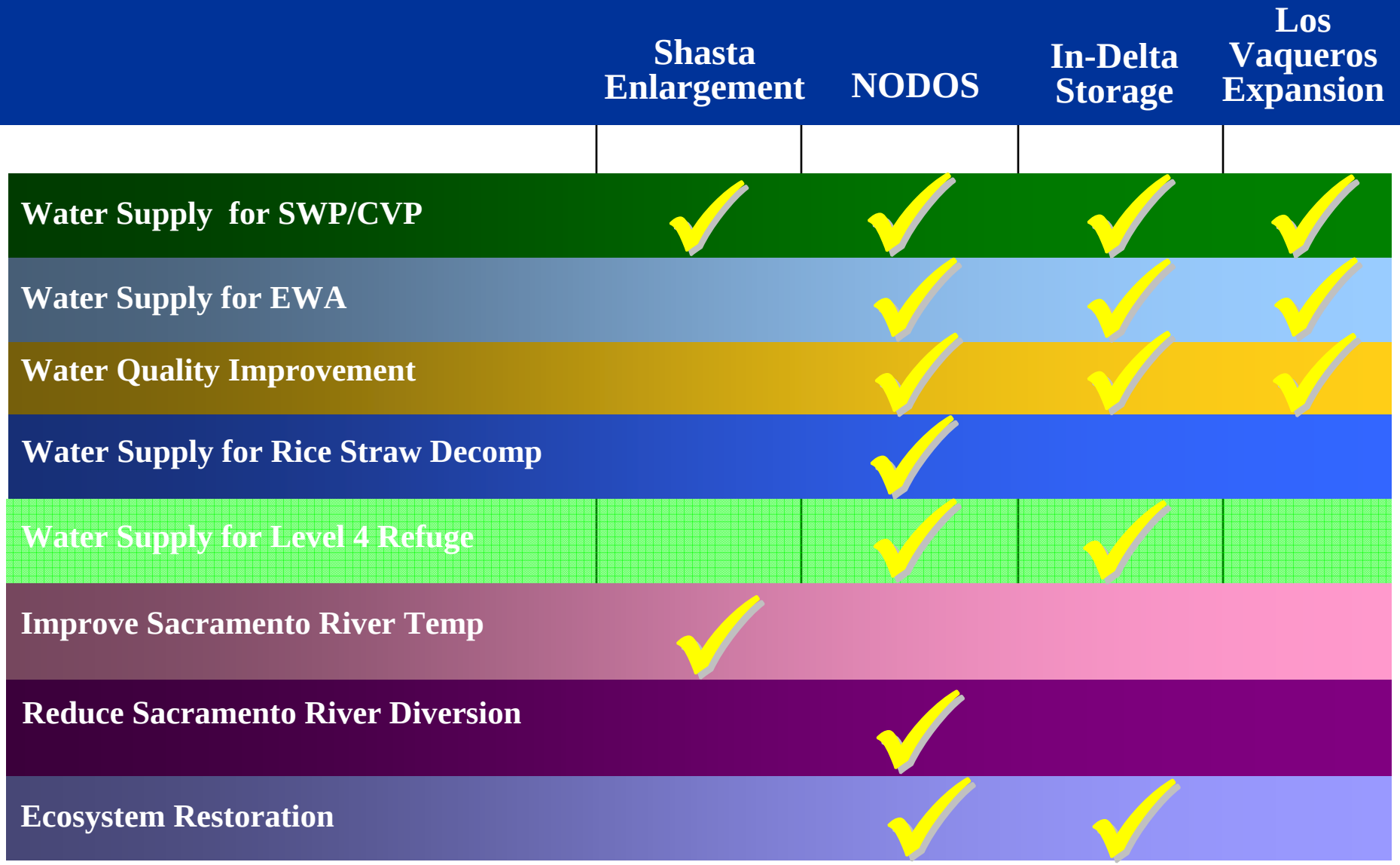
- Provide information to help potential project participants assess their interest in the storage investigations

- Assist responsible agencies with decisions about future steps in the planning investigations for the storage projects

Progress Report Content

- Presents an overview of major findings to date
- Includes a comparable set of potential benefits based on modeling performed using common model codes and analysis protocols
- Discusses Common Considerations (Funding, Common Assumptions, and Defining Alternatives)
- Discusses Project Specific Considerations
- Provides status on the latest activities of the five storage investigations

Potential Primary Benefits



Potential Primary Benefits
Table 1

Potential Benefits		Shasta Lake Water Resources Investigation	North-of-the-Delta Offstream Storage	In-Delta Storage	Los Vaqueros Reservoir Expansion
		(Difference from base condition)			
(SWP/CVP) Water Supply	- Long-term average (TAF/yr)	40 - 85	90 - 260	50 - 77	0 - 13
	- Driest periods average (TAF/yr)	60 - 160	200 - 390	50 - 64	0 - 25
EWA Water Supply	- Long-term average (TAF/yr)	DNM	0 - 124	14 - 28	117 - 143
	- Driest periods average (TAF/yr)		0 - 147	0	42 - 65
		EWA to be considered as a project objective in future studies	EWA water supply delivered to Delta inflow	EWA water supply delivered to San Luis Reservoir	Water provided by reducing pumping at Banks P.P. while maintaining SBA deliveries through LVE releases
Releases for Improving Delta Water Quality	- Long-term average (TAF/yr)	DNM	20 - 210	35	DNM
	- Driest periods average (TAF/yr)		0 - 137	0	
Water Quality Improvements		Did not conduct chloride analysis	+4% to -27%	Did not conduct chloride analysis	-50% to -58%
			Change in average Cl loading to Banks P.P. for Jul-Oct (1976-1991) period		Change in Sep-Nov long-term average Cl delivered to SBA contractors
Water Supply for Rice Straw Decomposition & Level 4 Refuges in Sacramento Valley	- Long-term average (TAF/yr)	DNM	70 - 81	DNM	DNM
	- Driest periods average (TAF/yr)		0 - 37		

DNM - Did Not Model as a primary project objective

Potential Primary Benefits
Table 1 (cont')

Potential Benefits	Shasta Lake Water Resources Investigation	North-of-the-Delta Offstream Storage	In-Delta Storage	Los Vaqueros Reservoir Expansion
	(Difference from base condition)			
Percent of Time Sacramento River at Bend Bridge exceeds 56° Fahrenheit (Apr-Sep) - Long-term	-3% to -7%	DNM	DNM	DNM
Early Life Stage Winter-run Salmon Mortality in Sacramento River Dry & Critical Periods	-0.3% to -1.4%	DNM	DNM	DNM
Early Life Stage Spring-run Salmon Mortality in Sacramento River Dry & Critical Periods	-1% to -9%	DNM	DNM	DNM
Net Increase in CVP Energy Production - Long-term average (GWh/yr)	10 - 40	Did not conduct energy production modeling	Did not conduct energy production modeling	Did not conduct energy production modeling
Reduction in Sacramento River Diversions (Apr-Aug) - Long-term average (TAF/yr)	DNM	170 - 230	DNM	DNM
Reduction in Sacramento River Diversions (Apr-Aug) - Driest periods average (TAF/yr)		115 -235		
Provide Spring Flows for Cottonwood Establishment (Provided by Shasta through Coordinated Operations) 8-year average TAF/year (8 years out of 73 years)	DNM	0 - 460	DNM	DNM
Provide Fall Stability Flows below Keswick Dam (Provided by Shasta through Coordinated Operations) Long-term average (TAF/year)	DNM	0 -120	DNM	DNM

DNM - Did Not Model as a primary project objective

Common Considerations

- Optimize the use of available and expected funding
- Maintain consistent assumptions and comparable analytical methods for all investigations
- Define specific project formulations that best describe the potential local, State, and Federal interest in the projects

Funding

Project	Funding Targets[1]	Available Funding Sources ($Millions)			Unmet Needs
		State[2]	Federal[3]	Total Available Funds	
North-of-the-Delta Offstream Storage	$14.30	$10.70	$1.30	$12.00	$2.30
Shasta Lake Water Resources Investigation	$10.40	$0.50	$4.50	$5.00	$5.40
In-Delta Storage	$5.50	$5.50		$5.50	$0.00
Los Vaqueros Reservoir Expansion	$20.90	$10.00	$4.20	$14.20	$6.70
Upper San Joaquin Storage Investigation	$13.20	$2.50	$3.50	$6.00	$7.20
TOTAL	$64.30	$29.20	$13.50	$42.70	$21.60

1. Total remaining funding needed over the 10-year Plan.
2. Remaining Prop. 50 funds available in Fiscal year 2005 and beyond.
3. Included Fiscal year 2005 appropriations and the President's FY 2006 budget.

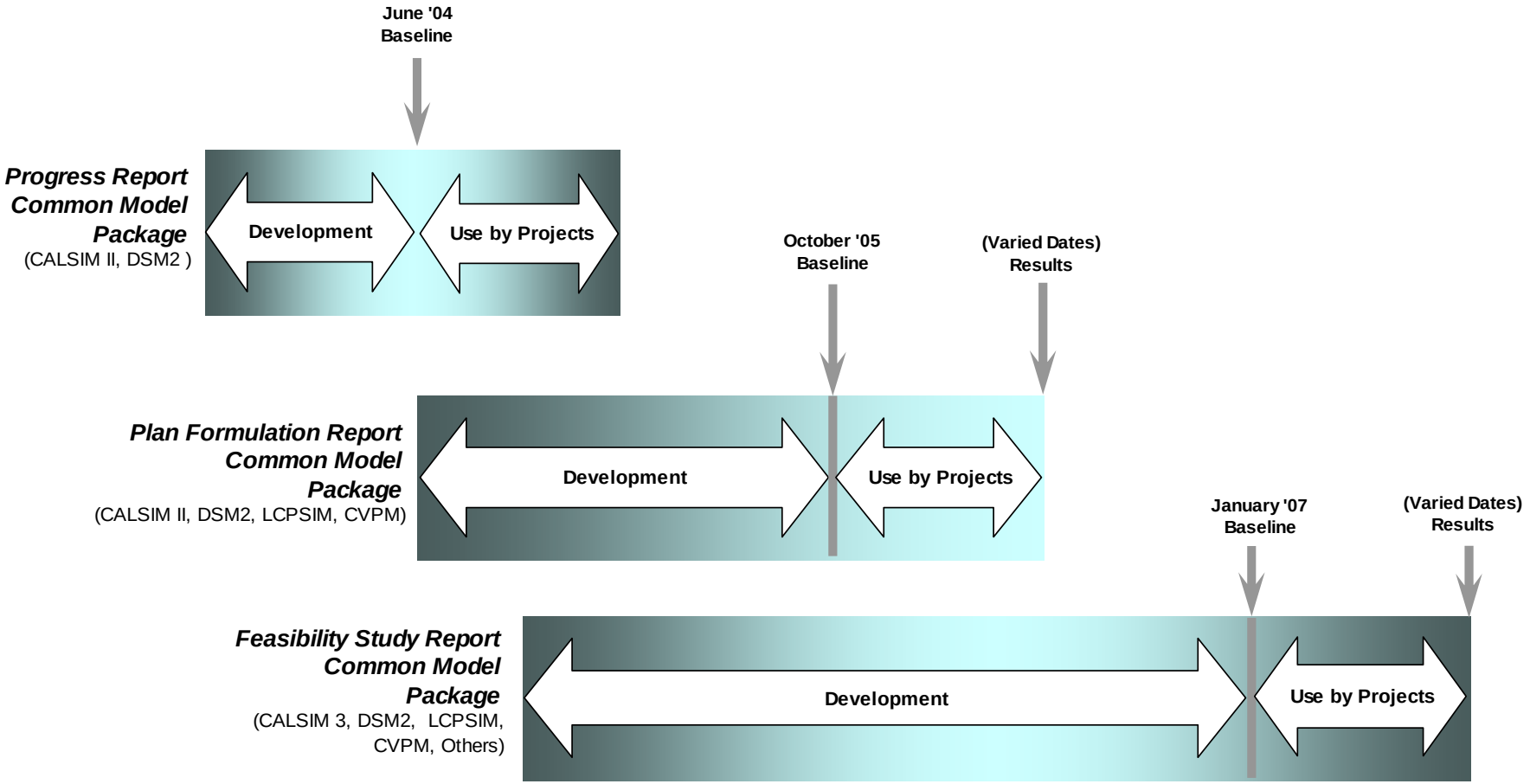
Developing Common Assumptions

- The Common Assumptions effort is to develop consistency and improve efficiency among the storage investigations

- The Common Assumptions effort will:
  - Develop a set of common tools and consistent analytical approaches
  - Develop common model packages
  - Define the CEQA and NEPA conditions

Common Assumptions

Common Model Package Development Timeline



Project Specific Considerations

Shasta Lake Water Resources Investigation

- Public Resources Code 5093.542 (c) allows DWR, but no other State agency, to conduct technical and economic studies of the McCloud River basin
- Potential additional impacts to the McCloud River
- Reclamation will evaluate the potential environmental effects on the McCloud River from raising Shasta Dam in Feasibility Report and EIS

Project Specific Considerations

North-of-the-Delta Offstream Storage

- Flow regime of the upper Sacramento River related to NODOS operations. A flow regime technical advisory group (TAG) was formed in 2002
- Administrative draft of the flow regime summary report and evaluation was prepared and distributed for review. NODOS staff is incorporating comments on the draft report
- A work plan is being developed to address flow regime issues

Project Specific Considerations

In-Delta Storage

- Effect of organic carbon on drinking water quality is a main challenge (data, time, funding)
- Delta Wetlands water rights permit voided by Appellate Court for failing to identify the buyers of the water and where it will be used
- Analyze potential impacts of releases from IDS on drinking water quality with data collected from the Jones Tract flooding

Project Specific Considerations

Los Vaqueros Reservoir Expansion

- DWR and CCWD are continuing discussions on forming a Joint Powers Authority (JPA) and working to determine if a JPA is the most appropriate CEQA lead

Project Specific Considerations

Upper San Joaquin Storage Investigation

- August 2004, U.S. District Court found Friant Dam has been operated in violation of California Fish and Game Code Section 5937, which requires releases from the dam to maintain the river's fishery

- Reclamation and DWR will continue to work with local water agencies, environmental groups, and stakeholders to develop a scientifically-based restoration plan

- Results of the plans will be used by the project in evaluating how USJRBSI can contribute to this solution

Next Steps

- Identify broad public benefits that will be evaluated in more detailed studies
- Continue to work with potential project participants to assess their needs and interests in the specific projects
- Complete the Plan Formulation Common Model Package
- Work with agencies and stakeholders to resolve project issues and considerations